CP200 Series Commercial / Industrial Pressure-Loaded Pressure Reducing Regulator

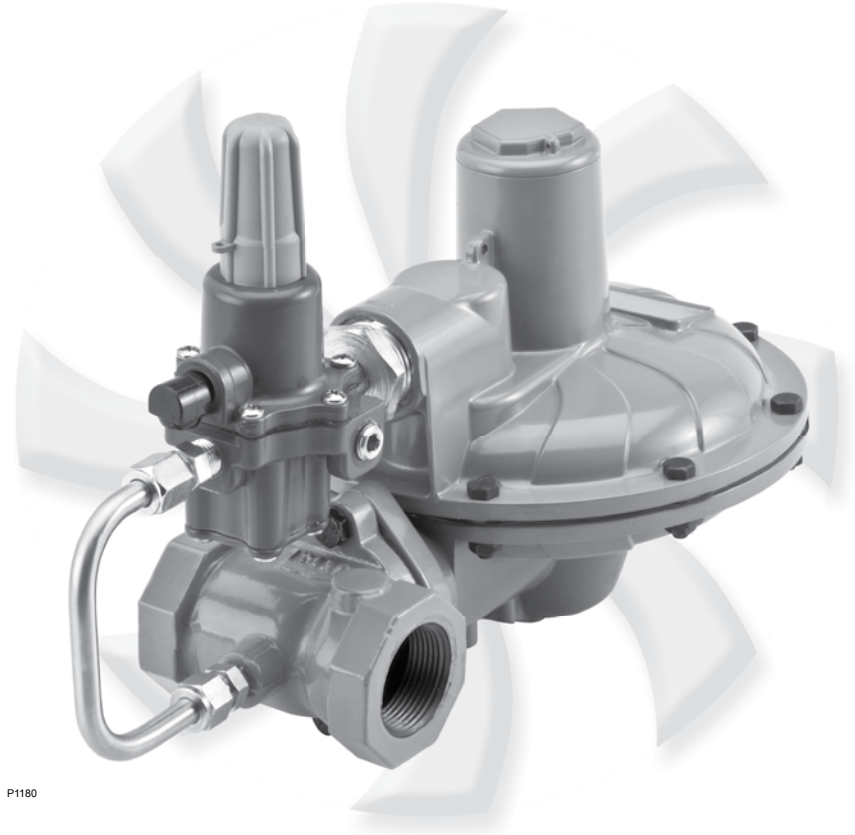

Figure 1. *Typical CP200 Pressure Loaded Pressure Reducing Regulator*

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Introduction

Scope of the Manual

This manual provides instructions for the installation, maintenance, and parts ordering information for CP200 Series pressure loaded pressure reducing regulators.

D103121X012

Table 1. *Available Configurations*

TYPE NUMBER							OPTIONS
C	P	2	0				
							OVERPRESSURE PROTECTION MODULE
				0			Without Overpressure Protection Module
				5			With Secondary Seat™ Protection
				6			With Secondary Seat Protection with bleed to indicate Secondary Seat is functioning
							PRESSURE REGISTRATION
					I		Internal Registration
							RELIEF
						N	Non Relief
						T	Internal Token Relief

Table 2. *Inlet Pressure Ratings and Flow and Sizing Coefficients*

SERIES	ORIFICE SIZE		MAXIMUM OPERATING INLET PRESSURE(1)(2)		FLOW COEFFICIENTS (WIDE-OPEN)		C_1	IEC SIZING COEFFICIENTS		
	Inch	mm	psig	bar	C_g	C_v		X_T	F_D	F_L
CP200	1/8	3.2	125	8.6	12	0.40	30	0.53	0.87	0.89
	3/16	4.8	125	8.6	24	0.80	30	0.58	0.82	
	1/4	6.4	125	8.6	44	1.52	29	0.53	0.85	
	3/8	9.5	60	4.1	102	3.30	31	0.60	0.83	
	1/2	13	40	2.8	172	4.40	39	0.97	0.72	
CP205 and CP206	1/8	3.2	125	8.6	12	0.4	30	0.53	0.87	
	3/16	4.8	125	8.6	24	0.8	30	0.58	0.82	
	1/4	6.4	125	8.6	44	1.5	29	0.53	0.85	
	5/16	7.9	100	6.9	70	2.7	30	0.53	0.85	

1. Inlet pressures based on lock-up performance. For maximum inlet pressure values with optimum regulating performance refer to the applicable Flow Capacity table in the bulletin.
2. To comply with ANSI B109.4 relief requirements, the maximum inlet pressure may need to be reduced.

⚠ WARNING

Failure to follow these instructions or to properly install and maintain this equipment could result in an explosion and/or fire causing property damage and personal injury or death.

Fisher® regulators must be installed, operated, and maintained in accordance with federal, state, and local codes, rules and regulations, and Emerson Process Management Regulator Technologies, Inc. (Regulator Technologies) instructions.

If the regulator vents gas or a leak develops in the system, service to the unit may be required. Failure to correct trouble could result in a hazardous condition.

Call a gas service person to service the unit. Only a qualified person must install or service the regulator.

Product Description

The CP200 Series pressure loaded regulators are intended for general pressure reduction for commercial and industrial applications using pressure factor measurement, also referred to as fixed factor billing.

Specifications

The Specifications section lists the specifications for the regulator. The following information are stamped on the regulator at the factory: Type, date of manufacture, spring range, orifice size, maximum inlet pressure, maximum operating outlet pressure, and maximum outlet casing pressure.

Available Configurations

Type CP200IN - Regulator with internal registration
Type CP200IT - Regulator with internal registration and token relief
Type CP205IN - Type CP200IN with Secondary Seat™ Protection
Type CP205IT - Type CP200IT with Secondary Seat Protection
Type CP206IT - Type CP200IT with Secondary Seat Protection with bleed to indicate Secondary Seat is functioning
See Table 1

Body Sizes, End Connection Style, and Pressure Rating[1]
See Table 4

Inlet Pressure Ratings[1]
See Table 2

Maximum Outlet Pressure[1]
Emergency Casing: 25 psig / 1.7 bar
Operating: 20 psig / 1.4 bar

Outlet Pressure Ranges
See Table 3

Pressure Loading Regulator Spring Case Connection
1/4 NPT

Orifice Sizes and Flow and IEC Sizing Coefficients
See Table 2

Temperature Capabilities[1][2]
-20 to 150°F / -29 to 66°C

Pressure Registration
Internal

Factory Setpoint Inlet Pressures for Various Orifice Sizes
1/8-inch / 3.2 mm: 80 psig / 5.5 bar
3/16-inch / 4.8 mm: 60 psig / 4.1 bar
1/4-inch / 6.4 mm: 40 psig / 2.8 bar
5/16-inch / 7.9 mm: 30 psig / 2.1 bar
3/8-inch / 9.5 mm: 25 psig / 1.7 bar
1/2-inch / 13 mm: 25 psig / 1.7 bar

Approximate Weight
10 pounds / 4 kg

1. The pressure/temperature limits in this Instruction Manual and any applicable standard or code limitation should not be exceeded.
2. Product has passed Regulator Technologies testing for lockup, relief start-to-discharge and reseal down to -40°.

Table 3. *Outlet Pressure Ranges*

OUTLET PRESSURE RANGES[1]		PART NUMBER	SPRING COLOR	SPRING WIRE DIAMETER		SPRING FREE LENGTH	
psig	bar			Inch	mm	Inch	mm
1 to 2	69 mbar to 0.14 bar	GE30199X012	Yellow Stripe	0.078	1.98	1.35	34.3
2 to 5	0.14 to 0.34	GE27213X012	Orange Stripe	0.100	2.54	1.47	37.4
5 to 10	0.34 to 0.69	GE39890X012	Black Stripe	0.114	2.90	1.47	37.4
10 to 20	0.69 to 1.4	GE30200X012	Purple Stripe	0.137	3.48	1.42	36.2

1. Outlet pressure range is controlled by 67CP Series pressure loading regulator spring.

Table 4. *Body Sizes, Material, End Connection, and Pressure Rating*

TYPE	BODY SIZE, NPS	END CONNECTION	BODY MATERIAL	FACE-TO-FACE DIMENSION		PRESSURE RATING	
				Inch	mm	psig	bar
CP200, CP205, and CP206	3/4	NPT	Gray Cast Iron	4	102	175	12.1
	3/4 x 1						
	3/4 x 1-1/4						
	1						
	1 x 1-1/4						
	1-1/4						

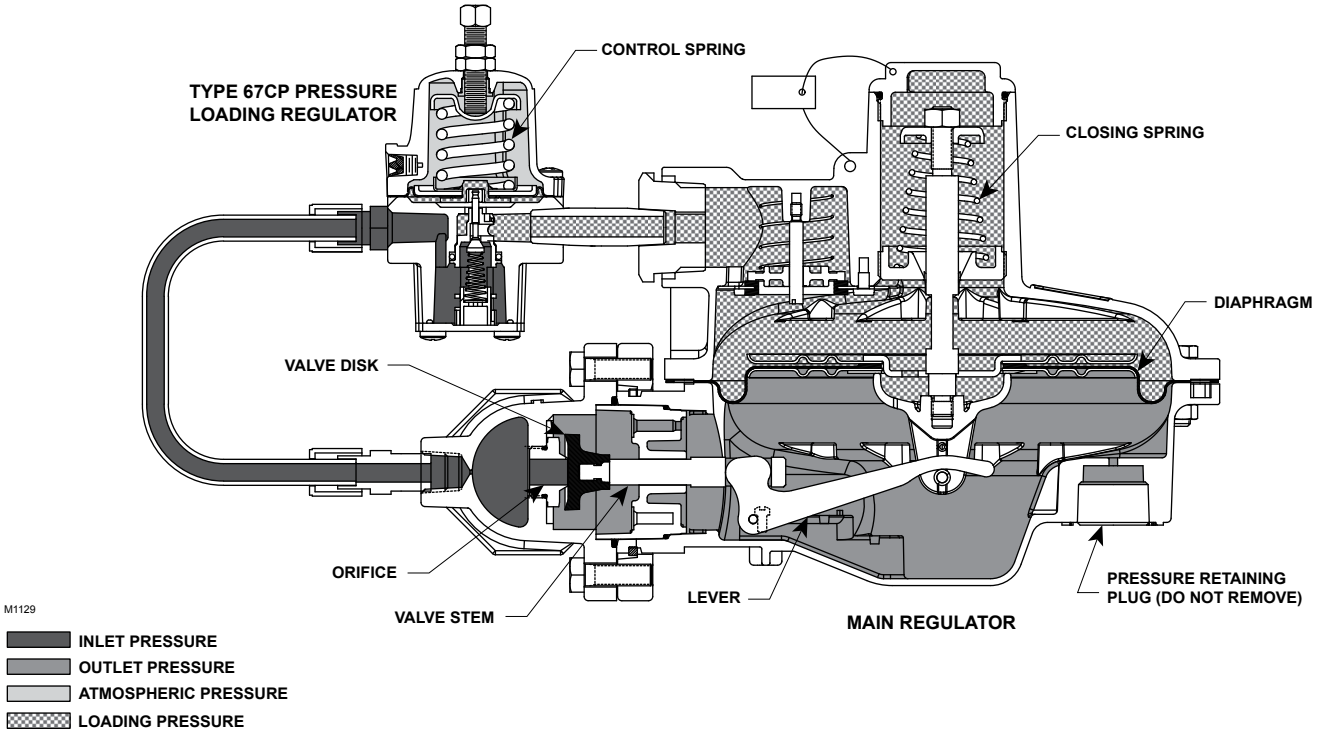

Figure 2. *Type CP200IN Pressure Loaded Pressure Reducing Regulator with Internal Registration Operational Schematic*

Principle of Operation

Refer to Figure 2. The CP200 Series has spring-to-close construction and uses 67CP Series pressure loading regulator to supply loading pressure to the top of the main diaphragm. Since the loading pressure regulator controls the main regulator, adjustment to the downstream pressure is made using the loading pressure regulator. The load pressure supplied by the loading regulator is constant and equal to the desired downstream pressure plus the pressure required to overcome the light closing spring.

Type CP200 Base Regulator

Increasing Downstream Demand

As downstream demand increases the outlet pressure registering on the underside of the main diaphragm decreases and the constant loading pressure above the main diaphragm forces the diaphragm downward. This downward diaphragm motion is transferred through the lever causing the main disk to move away from the orifice seating surface to supply additional flow downstream to the required demand.

Decreasing Downstream Demand

As downstream demand decreases the outlet pressure registering on the underside of the main diaphragm increases forcing the main diaphragm upward. This upward motion is transferred through the lever causing the main disk to move toward the orifice seating surface to reduce flow to meet the required demand.

Zero Downstream Demand (Lockup)

As downstream demand decreases further, the outlet pressure registering under the main diaphragm together with the closing spring act to close the main disk against the orifice seating surface. At this point the loading regulator will continue to supply a small amount of gas downstream that is equal to the capacity of the bleed restriction in the diaphragm assembly. As downstream demand decreases to zero flow outlet pressure rises to meet the lock-up pressure of the loading regulator. This causes the loading regulator to lock up to stop all flow downstream.

Type CP205 with Secondary Seat™ Protection

Refer to Figure 3. The Type CP205 provides Secondary Seat Protection. As downstream demand decreases and downstream pressure rises to the regulator pressure lock-up value, the regulator will lock up. If, however, damage has occurred to the primary disk, to the primary orifice's seating surface, or debris has become lodged between the primary disk and primary orifice, the outlet pressure will continue to rise. This additional pressure causes the primary disk to apply additional force to the orifice seating surface, which causes the secondary seating surface to move toward the secondary disk or sealing surface. If downstream demand decreases to zero, then the secondary seating surface will contact the sealing surface to provide lockup.

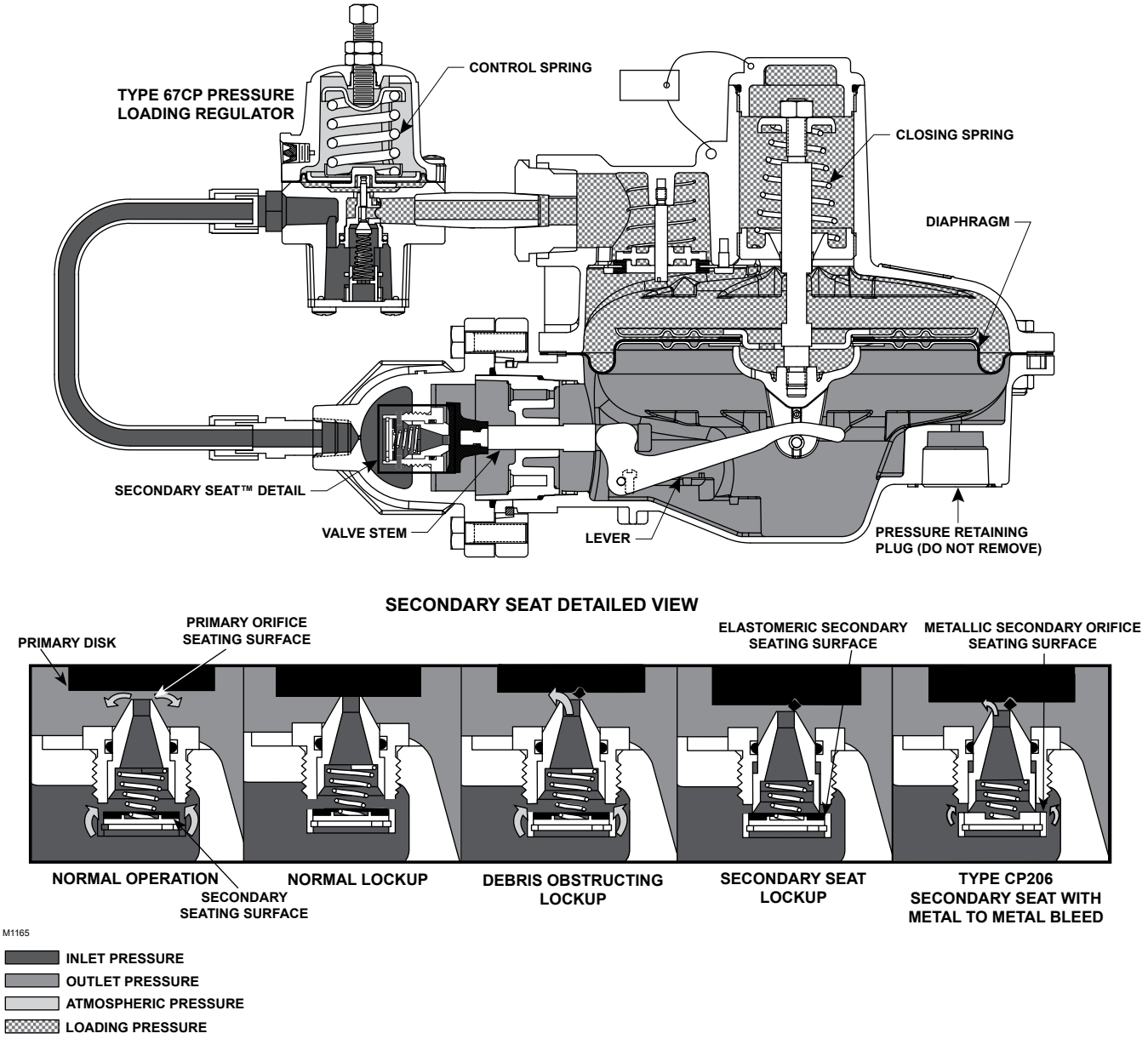

Figure 3. *Type CP205IT Pressure Loaded Pressure Reducing Regulator with Internal Registration and Token Relief Operational Schematic*

Type CP206 Secondary Seat Protection with Bleed

The Type CP206 provides small bleed to the downstream system as an indication that the Secondary Seat is providing lockup. In the event that the primary orifice and disk cannot provide lockup, the secondary seating surface will move into contact with a metal disk. This metal to metal interface will allow a small amount of gas to bleed downstream thereby increasing outlet pressure until the Internal Token relief valve begins to discharge a small amount of gas to the atmosphere. The odor of this discharged gas provides an indication that the regulator is relying on the Secondary Seat for overpressure protection.

Types CP205 and CP206 Secondary Seat Protection Limitations

CAUTION

Overpressure conditions can occur in the downstream piping when the Secondary Seat Protection is installed. The Secondary Seat Protection serves only as a backup to the primary seat for lockup. Refer to the sections on Overpressure Protection and Maintenance.

Secondary Seat™ Protection does not provide additional overpressure protection in the event the secondary seat or disk is damaged by debris or contamination in the pipeline, or from conditions that would cause the regulator to go wide-open. When selecting Secondary Seat Protection option, it is recommended that:

- Other additional overpressure protection methods be added in the downstream system as discussed in the Overpressure Protection section; and
- A periodic downstream lock-up pressure test is done. If lockup pressures are elevated above normal, that indicates that the primary orifice/seat or the disc are no longer providing shutoff and that the Secondary Seat Protection option is serving as the primary shutoff. The regulator should then be maintained as discussed in the Maintenance section of this manual.

Installation and Overpressure Protection

WARNING

Personal injury or system damage may result if this regulator is installed, without appropriate overpressure protection, where service conditions could exceed the limits given on the regulator nameplate.

Regulator installations should be adequately protected from physical damage.

The loading regulator vent should be kept open to permit free flow of gas to the atmosphere. Protect vent openings against entrance of rain, snow, insects, or any other foreign material that may plug the vent or vent line. On outdoor installations, point the loading regulator vent downward to allow condensate to drain (see Figures 4 and 8). This minimizes the possibility of freezing and of water or other foreign materials entering the vent and interfering with proper operation.

Under enclosed conditions or indoors, escaping gas, such as in the case of a ruptured diaphragm, may accumulate and be an explosion hazard.

CAUTION

The CP200 Series regulators have an outlet pressure rating lower than their inlet pressure rating. If actual inlet pressure can exceed the outlet pressure rating, outlet overpressure protection is necessary. However, overpressuring any portion of the regulators beyond the limits in the Specifications section may cause leakage, damage to regulator parts, or personal injury due to bursting of pressure-containing parts.

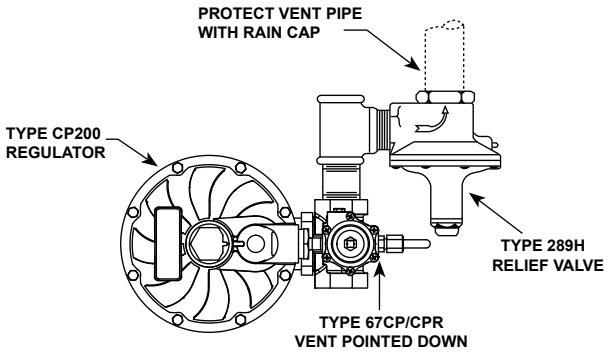

Figure 4. *CP200 Series Regulator Installed with a Type 289H Relief Valve for High Capacity Relief*

Some type of external overpressure protection should be provided if inlet pressure will be high enough to damage downstream equipment. Common methods of external overpressure protection include relief valves, monitoring regulators, shut-off devices, and series regulation.

If the regulator is exposed to an overpressure condition, it should be inspected for any damage that may have occurred. Regulator operation below these limits does not preclude the possibility of damage from external sources or from debris in the pipeline.

The CP200 Series is an internally registered pressure reducing regulator and has outlet pressure ratings lower than the inlet pressure ratings. Complete downstream overpressure protection is needed if the actual inlet pressure exceeds the outlet pressure rating.

General Installation Instructions

Before installing the regulator:

- Check for damage, which might have occurred during shipment.
- Check for and remove any dirt or foreign material, which may have accumulated in the regulator body.
- Blow out any debris, dirt or copper sulfate in any copper tubing and the pipeline.
- Apply pipe compound to the external threads of the pipe before installing the regulator.
- Ensure gas flow through the regulator is in the same direction as the arrow on the body. “Inlet” and “Outlet” connections are clearly marked.

Installation Location

- The installed regulator should be adequately protected from vehicular traffic and damage from other external sources.

- Install the regulator with the vent pointed vertically down, see Figure 4. If the vent cannot be installed in a vertically down position, the regulator must be installed under a separate protective cover. Installing the regulator with the vent down allows condensation to drain, minimizes the entry of water or other debris from entering the vent, and minimizes vent blockage from freezing precipitation.
- Do not install the regulator in a location where there can be excessive water accumulation or ice formation, such as directly beneath a downspout, gutter, or roof line of building. Even a protective hood may not provide adequate protection in these instances.
- Install the Regulator so that any gas discharge through the vent or vent assembly is over 3 feet / 0.91 m away from any building opening.

Regulators Subjected to Heavy Snow Conditions

Some installations, such as in areas with heavy snowfall, may require a hood or enclosure to protect the regulator from snow load and vent freeze over.

Installation with External Overpressure Protection

If the regulator is used in conjunction with a Type 289H relief valve, it should be installed as shown in Figure 4. The outside end of the vent line should be protected with a rainproof assembly.

The Type 289H is typically set 10-inches w.c. / 25 mbar higher than the outlet pressure setting of the regulator, up to 30-inches w.c. / 75 mbar outlet pressure. For pressure greater than this, set the Type 289H 0.75 psi / 0.05 bar higher than the outlet pressure setting of the regulator.

Vent Line Installation

The CP200 Series regulators have a 1/4 NPT screened vent opening in the spring case of the Type 67CP loading regulator. If necessary to vent escaping gas away from the regulator, install a remote vent line in the Type 67CP spring case tapping. Vent piping should be as short and direct as possible with a minimum number of bends and elbows. The remote vent line should have the largest practical diameter. Vent piping on regulators with internal token relief must be large enough to vent all relief valve discharge to atmosphere without excessive backpressure and resulting excessive pressure in the regulator.

Periodically check all vent openings to be sure that they are not plugged or obstructed.

Outlet pressure ranges are shown in Table 3. The maximum emergency (casing) outlet pressure is 25 psig / 1.7 bar.

Token Relief

Types with a “T” in the type number, e.g., Type CP200IT provide an optional small capacity or token relief located in the Type 67CPR to relieve minor overpressure caused by thermal expansion or minor nicks in the orifice or disk.

Startup

CAUTION

Pressure gauges must always be used to monitor downstream pressure during startup. Procedures used in putting this regulator into operation must be planned accordingly if the downstream system is pressurized by another regulator or by a manual bypass.

If the downstream system is not pressurized by another regulator or manual bypass valve, use the following procedure to startup the regulator.

1. Check to see that all appliances are turned off.
2. Slowly open the upstream shut-off valve.
3. Check inlet and outlet pressure for correct values.
4. Check all connections for leaks.
5. Turn on utilization equipment and recheck the pressure.

Adjustment

To increase the outlet pressure setting of the regulator, the adjusting screw (key 18, Figure 8) of the loading pressure regulator must be turned clockwise. This requires loosening the locknut (key 19). To reduce the outlet pressure setting, turn the adjusting screw counterclockwise. Retighten the locknut. A pressure gauge should always be used to monitor downstream pressure while adjustments are being made.

CAUTION

Do not remove the locknut or adjust the spring to produce an outlet pressure setting outside the indicated spring range.

Shutdown

Installation arrangements may vary, but in any installation it is important that the valves be opened or closed slowly and that the outlet pressure be vented before venting inlet pressure to prevent damage caused by reverse pressurization of the regulator. The steps below apply to the typical installation as indicated.

1. Open valves downstream of the regulator.
2. Slowly close the upstream shut-off valve.
3. Release of downstream pressure should be automatic as the regulator opens in response to the lowered pressure on the diaphragm.
4. Close the outlet shut-off valve.

Maintenance

WARNING

To avoid personal injury or equipment damage, do not attempt any maintenance or disassembly without first isolating the regulator from system pressure and relieving all internal pressure as described in "Shutdown".

Regulators that have been disassembled for repair must be tested for proper operation before being returned to service. Only parts manufactured by Regulator Technologies should be used for repairing Fisher® regulators. Restart gas utilization equipment according to normal startup procedures.

Due to normal wear or damage that may occur from external sources, this regulator should be inspected and maintained periodically. The frequency of inspection and replacement of parts depends upon the severity of service conditions or the requirements of local, state, and federal rules and regulations.

Regulator Reassembly

It is recommended that a good quality pipe thread sealant be applied to pressure connections and fittings and a good quality lubricant be applied to all O-rings except when replacing key 19, as key 19 is a friction fit O-ring for holding the stem guide into the lower casing. Also apply an anti-seize compound to the adjusting screw threads and other areas as needed.

Annual Maintenance on Types CP205 and CP206 Secondary Seat™ Protection

The Type CP205 regulator does not have any means to alert when the Secondary Seat operates at lockup. Therefore it is recommended that an annual lock-up test be done on the regulator to determine if the lock-up pressure is higher than normal. If so, the regulator primary disk and orifice should be replaced.

Types CP205IT and CP206 have internal token relief. Internal relief operation on these units is an indication that the Secondary Seat Protection on the Type CP205IT may not be working and that the Type CP206 Secondary Seat may have closed. Maintenance should address any potential causes for internal relief operation as well as other regulator malfunctions separate from the Secondary Seat.

To Replace Main Diaphragm

1. Disconnect the tubing connectors (key 29, Figure 5) from the loading pressure regulator.
2. Remove closing cap (key 60) and unscrew the nut (key 47). Unthread the upper spring seat (key 42) using a flat head screwdriver. Remove the closing spring (key 38).
3. Unthread the cap screw (key 15) from the nuts (key 16) and remove. Lift the spring case (key 1) with attached pilot off the lower casing (key 9) and the closing stem (key 44).
4. Lift the diaphragm assembly (key 55) slightly so that the pusher post (key 51) can release the valve lever (key 10).
5. Hold the pusher post (key 51) fixed while unscrewing the closing stem (key 44) from the pusher post (key 51). Remove the diaphragm retainer (key 43) and diaphragm head (key 55). The diaphragm can now be removed.
6. Reassemble in the reverse order of the above procedure. Ensure that the diaphragm assembly is assembled so that when the diaphragm bolt holes are aligned with the lower casing (key 9) bolt holes that the lever (key 10) can be easily inserted into the slot of the pusher post (key 50, Figures 5 and 6). This ensures that no rubbing occurs between the lever and diaphragm assembly during its upward and downward travel. The arch or bow of the diaphragm should be toward the lower casing (key 9, Figure 5). Ensure the diaphragm does not fold over at the flange when tightening the flange screws.

To Replace Valve Disk and Orifice

1. Remove the tubing connectors (key 29, Figure 5) from the regulator body (key 70).
2. Remove the two bolt (key 71) which hold the union ring (key 17) portion of the lower casing to the body.
3. The regulator can be removed from the body, exposing the disk (key 36) and the orifice (key 25).
4. Examine the seating surface of the disk. If it is nicked, cut, or otherwise damaged, the disk should be removed from the valve stem (key 11) and replaced.
5. a. If the seating edge of the Type CP200 orifice (key 25, Figure 7) is nicked or rough, remove the orifice from the body using a 7/8-inch / 22 mm socket wrench.
   b. If equipped with a Type CP205/206 Secondary Seat orifice assembly, inspect the primary seating surface as well as the secondary seating surface and sealing surface. If nicks or other damage are present, remove the orifice assembly from the body using a 7/8-inch / 22 mm socket wrench.

   Apply anti-seize lubricant to the external threads of the new orifice and reassemble.
6. Reassemble in reverse order of the above procedure. Ensure that the lever has not become detached from the pusher post. Care should be taken so that the O-ring (key 21) is not cut.

Types 67CP and 67CPR

Trim Maintenance

Key Numbers are referenced in Figure 8.

1. Remove four flange screws (key 3) from the bottom plate (key 39) and separate the bottom plate and O-ring (key 4) from the body (key 1).

2. Inspect the removed parts for damage and debris. Replace any damaged parts.
3. To remove the valve cartridge assembly, grasp the end of the cartridge (key 10) and pull it straight out of the body (key 1). Replace with new cartridge assembly. The cartridge assembly may be disassembled and parts may be cleaned or replaced. If the soft seat (key 15) was removed, make sure it is properly snapped into place before installing the valve cartridge assembly.
4. Check O-ring (key 14) for wear and replace if necessary. Apply lubricant to the O-ring and place in the body. Align cartridge key to keyway in body and insert. Reinstall the O-ring (key 4), secure the bottom plate (key 39) with screws (key 3), and torque to 15 to 30-inch pounds / 2 to 4 N•m.

Parts Ordering

The type number, orifice size, and date of manufacture are stamped on the nameplate. Always provide this information in any correspondence with your local Sales Office regarding replacement parts or technical assistance. If construction changes are made in the field, be sure that the nameplates are also changed to reflect the most recent construction.

When ordering replacement parts, reference the key number of each needed part as found in the following parts list. Separate kit containing all recommended spare parts is available.

Parts List

CP200 Series Main Valve and Actuator (Figures 5, 6, and 7)

Key	Description	Part Number
	Spare Parts (Repair Parts Kit includes keys 19, 21, 27, 36, 55, and 62)	
	Type CP200	RCP200X0012
1	Upper Spring Case, Aluminum	GE24555X012
4	Stabilizer Guide, Stainless steel	GE27061X012
5	Stabilizer, Plastic	GE46735X012
6	Stabilizer Spring, Stainless steel	GE35010X012
7	Pipe Nipple, NPT, Zinc-plated steel	1C488226232
8	Pipe Bushing, Plated Carbon steel	1H1714X0032
9	Lower Casing, Aluminum	GE24289X012
10	Lever, Steel	GE27194X012
11	Stem, Aluminum	GE27439X012
13	Lever Pin, Stainless steel	T14397T0012
14	Lever Screw, Zinc-plated steel (2 required)	GE34243X012
15	Bolt, steel (8 required)	GE32059X012
16	Nut, steel (8 required)	GE32060X012
17	Union Ring, Aluminum	GE26591X012
18	Snap Ring, Stainless steel	T1120637022
19*	O-ring, Nitrile (NBR)	1K594906562
20	Stem Guide, Aluminum	GE31963X012
21*	O-ring, Nitrile (NBR)	GE45216X012
22	Pipe Plug, 3/4 NPT, Carbon steel	GE34199X012
25	Orifice, Aluminum	
	1/8-inch / 3.1 mm	1A936709012
	3/16-inch / 4.7 mm	00991209012
	1/4-inch / 6.4 mm	0B042009012
	3/8-inch / 9.5 mm	0B042209012
	1/2-inch / 13 mm	1A928809012
25	Orifice Assembly, Brass/Nitrile (NBR) With Secondary Seat™	
	Without Bleed Indication	
	1/8-inch / 3.1 mm	GE31991X012
	3/16-inch / 4.7 mm	GE32008X012
	1/4-inch / 6.4 mm	GE32010X012
	5/16-inch / 7.9 mm	GE32012X012
	With Bleed Indication	
	1/8-inch / 3.1 mm	GE32007X012
	3/16-inch / 4.7 mm	GE32009X012
	1/4-inch / 6.4 mm	GE32011X012
	5/16-inch / 7.9 mm	GE32014X012
27*	O-ring, Nitrile (NBR)	11A8741X052
29	Tube Connector, 1/4 x 3/8-inch / 6.4 x 9.5 mm (2 required)	
	Parker 6FBU-S Stainless steel Ferrule	- - - - - - - - - - -
	Parker 6FBU-SS Stainless steel	- - - - - - - - - - -
	Swagelok® Stainless steel	- - - - - - - - - - -
30	Pilot Supply Tubing, Stainless steel	- - - - - - - - - - -
36*	Disk	
	Standard Seat, Nitrile (NBR)	GE38132X012
	Secondary Seat, Nitrile (NBR)	GG01395X012
38	Closing Spring, Stainless steel	GE27211X012
42	Upper Spring Seat, Aluminum	GE27349X012
43*	Diaphragm Retainer, Zinc-plated steel	GE27327X012
44	Closing Stem, Aluminum	GE27397X012
47	Nut, Steel	GE30042X012
51	Pusher Post, Aluminum	ERAA00877A0
53	Pusher Post Pin, Stainless steel	GE29761X012
54	Roller Pin, Brass	GE27060X012
55*	Diaphragm Assembly, Steel/Nitrile (NBR)	GE32574X012
55A	Diaphragm	- - - - - - - - - - -
55B	Diaphragm Head (2 required)	- - - - - - - - - - -
55D	Diaphragm Pad	- - - - - - - - - - -
56	Retaining Ring, Pusher Post Pin, steel	GE33772X012
57	Slotted Spring Pin, Zinc-plated steel	GE33668X012
60	Closing Cap, Aluminum	GE29244X012
62*	O-ring, Nitrile (NBR)	T10275X0012
65	Adjusting Screw, Aluminum	GE27828X012
70	Globe Valve Body, Gray cast iron	
	3/4 NPT	GE30991X012
	3/4 X 1 NPT	GE30992X012
	3/4 X 1-1/4 NPT	GE17958X012
	1 NPT	GE30993X012
	1 X 1-1/4 NPT	GE18079X012
	1-1/4 NPT	GE18080X012
71	Bolt, Steel	GE32061X012
90	Nameplate	- - - - - - - - - - -
91	Warning Label	- - - - - - - - - - -
93	Label	- - - - - - - - - - -
94	Label Overlay	- - - - - - - - - - -
95	Grommet, Nitrile (NBR)	GE35358X012
96	Caution Tag (when specified)	- - - - - - - - - - -
100	Wire Seal (when specified)	- - - - - - - - - - -
103	Stabilizer Retainer, Zinc-plated steel	GE27024X012
104	Stabilizer Screw, Zinc-plated steel (3 required)	GE29724X012

Type 67CP Pressure Loading Regulator (Figure 8)

Key	Description	Part Number
	Valve Cartridge Assembly	
	For Type 67CP (without relief) only (includes keys 10, 11, 12, 13, 14, and 15)	T14121T0082
	For Type 67CPR (with relief) only (includes keys 10, 11, 12, 13, and 14)	T14121T0142

*Recommended spare part.
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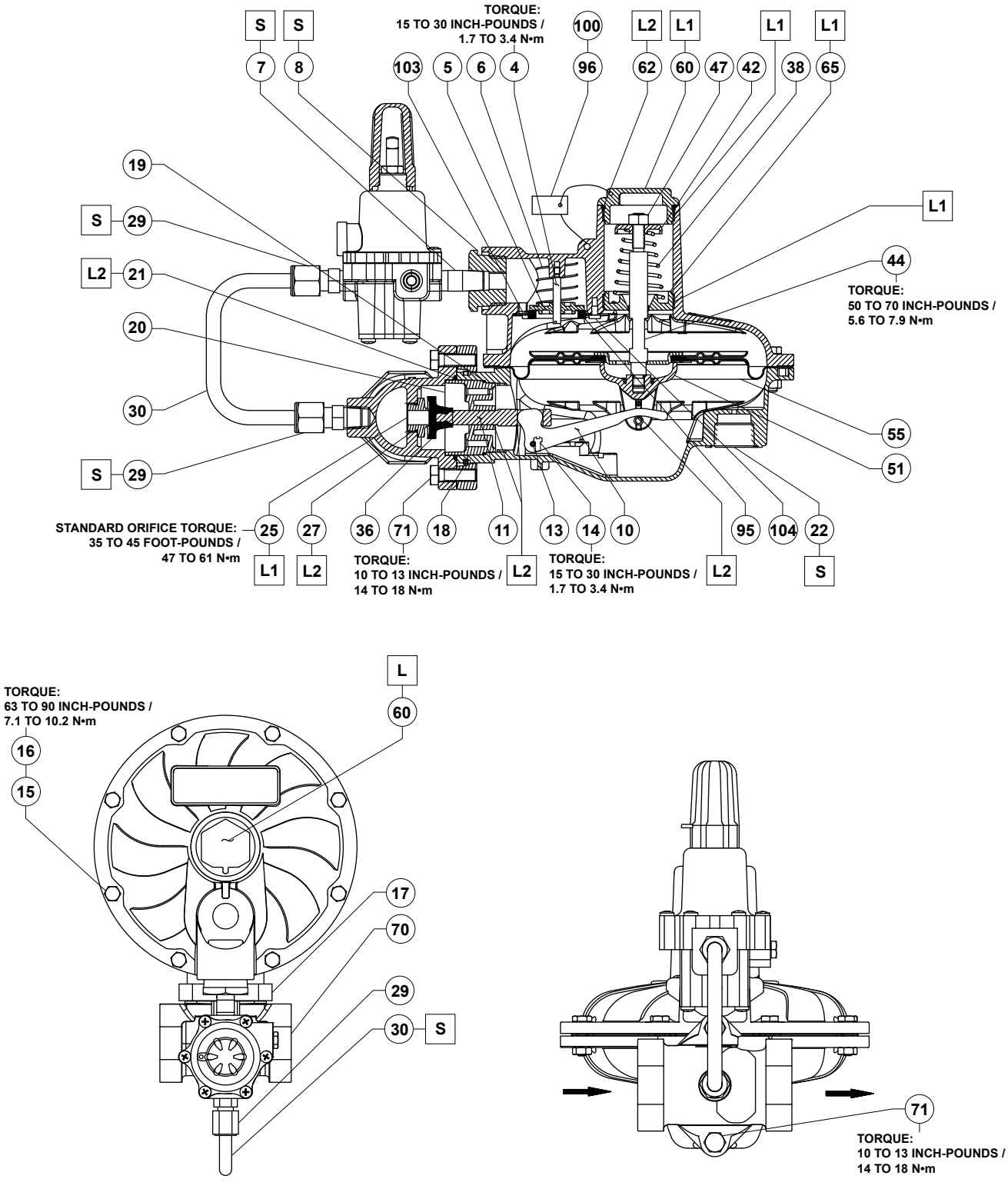
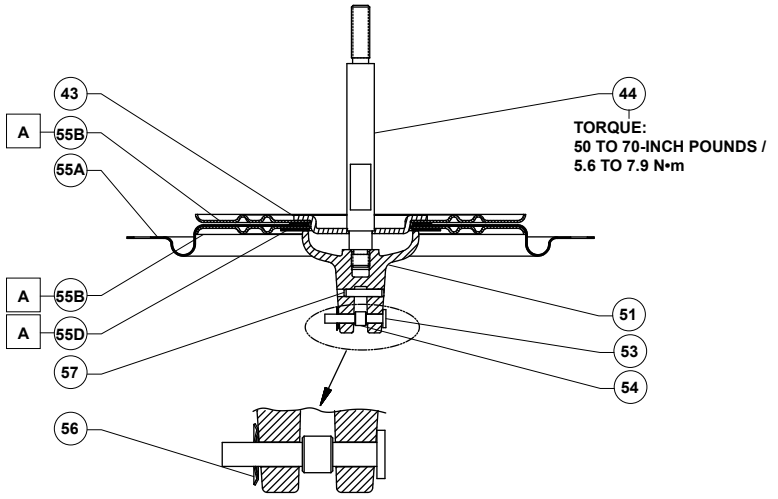


☐ APPLY LUBRICANT (L) / SEALANT (S)(1)
L1 = ANTI-SEIZE LUBRICANT
L2 = SILICON GREASE
S = THREAD SEALANT

1. LUBRICANTS/SEALANT MUST BE SELECTED SUCH THAT THEY MEET THE TEMPERATURE REQUIREMENTS.

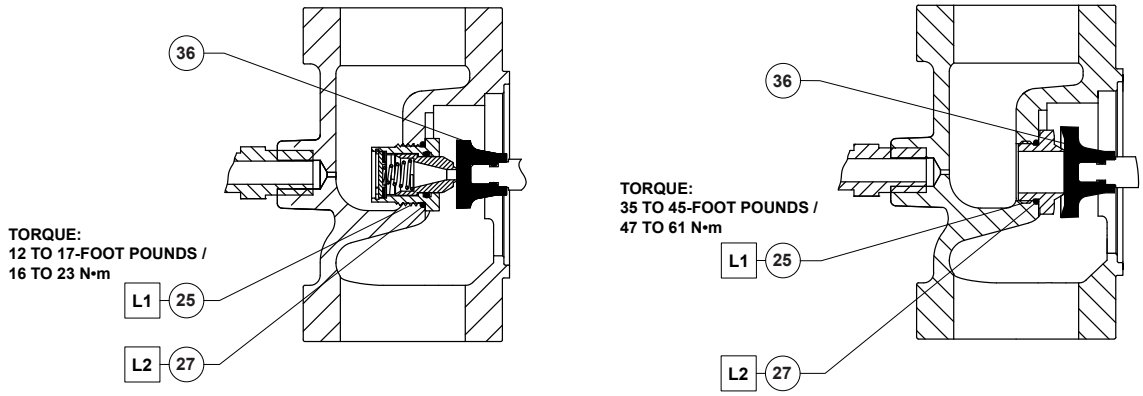
Figure 5. *CP200 Series Regulator Assembly*



☐ APPLY ADHESIVE (A)(1)

1. ADHESIVE MUST BE SELECTED SUCH THAT THEY MEET THE TEMPERATURE REQUIREMENTS.

Figure 6. *CP200 Series Diaphragm and Stem Assembly*



TYPE CP205 OR CP206 SECONDARY SEAT™ ORIFICE

TYPE CP200 STANDARD ORIFICE/SEAT

☐ APPLY LUBRICANT (L)(1)
L1 = ANTI-SEIZE LUBRICANT
L2 = SILICON GREASE

1. LUBRICANTS MUST BE SELECTED SUCH THAT THEY MEET THE TEMPERATURE REQUIREMENT

Figure 7. *Standard Orifice/Seat and Secondary Seat View*

Type 67CP Pressure Loading Regulator (Figure 8) (continued)

Key	Description	Part Number
1	Body, Aluminum	T40643T0RG2
3	Flange Screw, steel (10 required)	T13526T0012
4*	O-ring, Nitrile (NBR)	T14380T0012
7	Bonnet Assembly, Aluminum/Steel	T14070T0022
10	Cartridge, Polyester	T80434T0012
11	Valve Stem, Brass	
	Type 67CP	T14053T0012
	Type 67CPR	GE43501X012
12	Valve Spring, 302 Stainless steel	GE27212X012
13	Valve Retainer, Polymer	T14071T0012
14*	O-ring, Nitrile (NBR)	T14063T0012
15	Soft Seat, Nitrile (NBR)	T14055T0012
16*	Diaphragm Assembly,	
	Type 67CP	
	Nitrile (NBR)/steel	T14119T0022
	Fluorocarbon (FKM)/steel	T14119T0042
	Type 67CPR, Nitrile (NBR)/Aluminum	GE40272X012

Key	Description	Part Number
17	Spring, Stainless steel	
	1 to 2 psig / 0.07 to 0.14 bar, Yellow Stripe	GE30199X012
	2 to 5 psig / 0.14 to 0.34 bar, Orange Stripe	GE27213X012
	5 to 10 psig / 0.34 to 0.69 bar, Black Stripe	GE39890X012
	10 to 20 psig / 0.69 to 1.4 bar, Purple Stripe	GE30200X012
18	Adjusting Screw, steel	T14101T0012
19	Locknut, steel	1A946324122
20	Spring Seat, steel	T14051T0012
23	Pipe Plug, steel	1C333528992
33	Closing Cap, Plastic	23B9152X012
39	Bottom Plate, 316/316L Stainless steel (NACE)	GE03520XRG2
45	Screen, Stainless steel	0L078343062
48*	Relief Plug (Type 67CPR only), Brass	GE43500X012
49	Relief Spring (Type CPR only), Stainless steel	GE40051X012

*Recommended spare part.

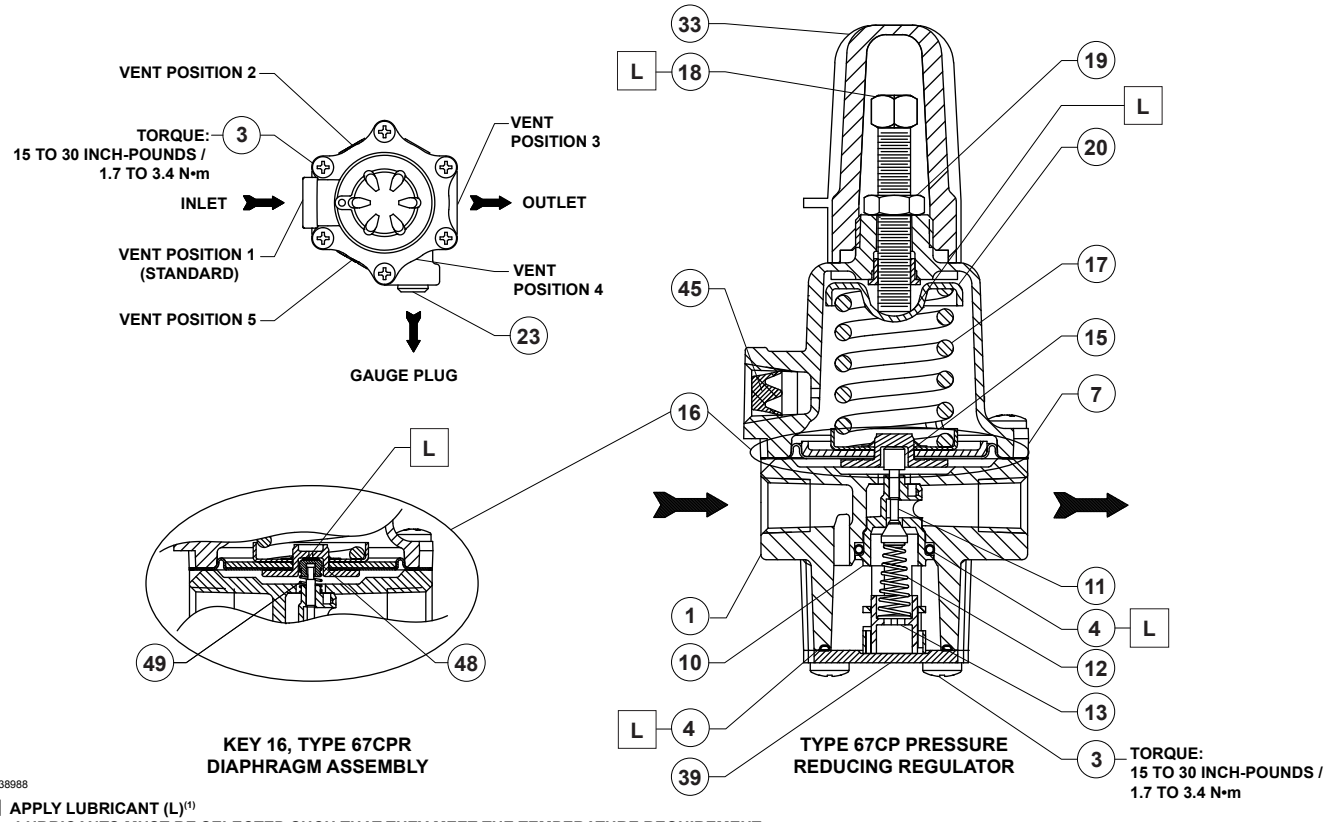


Figure 8. *67CP Series Pressure Loading Regulator Assembly*

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